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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/919,994

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Rui Xie

D-6400 CIP

8016

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06/10/2004

Crompton Corporation  
Benson Road  
Middlebury, CT 06749

EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/919,994

Applicant(s)

XIE ET AL.

eb14

Examiner

Rabon Sergent

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 14-26 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/2/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. Applicant's election without traverse of Group I, claims 1-13 and 27 in the reply filed on April 2, 2003 is acknowledged. Claims 14-26 and 28 have been withdrawn from further consideration as they are directed to a non-elected invention.
2. The Petition for Correction of Inventorship under 37 CFR 1.48(a), filed November 5, 2002, has been granted.
3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The subject matter of claims 3 and 8 lacks antecedence from the specification.
4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what esters are encompassed by the language, "aromatic, aliphatic esters".
5. Claims 6-9, 13, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have failed to set forth the basis for the claimed percent content of the diphenylmethane diisocyanate monomer. Furthermore, applicants have failed to specify the type of percent (i.e.; weight or mole) for the free diphenylmethane diisocyanate of claim 13.
6. Claims 1-4, 8, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. The language; “above about 200°C”, “up to about 150°C”, “at least about 80%”, and “no more than about 0.3%”; renders the claims indefinite, because it is unclear if the use of “about” with “above”, “up to”, “at least”, and “no more than” causes the language to encompass values above or below the recited value which otherwise would have been definitively limited by the aforementioned language if “about” was not used.

7. Claims 9, 11, and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants have failed to specify the type of molecular weight (weight average or number average) or how it has been determined. This information is necessary for the proper identification of the polyols.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 5-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Schnabel et al. ('171).

Patentees disclose prepolymers having isocyanate monomer contents of less than 0.05 percent. Furthermore, patentees disclose reactants that meet those claimed. See abstract and columns 1-3.

10. Product by process claims are examined as product claims. The process limitations are given patentable weight only if it has been established that the process causes the product to have different properties from the prior art product.

11. Claims 1-6 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Dunlap et al. ('442).

Patentees disclose the removal of isocyanate monomers from isocyanate prepolymers wherein solvents, which have boiling point properties that meet those of applicants' solvents, are added to the prepolymers, and the solvent containing prepolymers are then subjected to distillation to obtain products having reduced levels of isocyanate monomers. Furthermore, the reference discloses that MDI is a suitable diisocyanate for the process. See abstract and columns 2-5 within Dunlap et al.

12. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosenberg et al. ('193).

Patentees disclose the removal of isocyanate monomers from isocyanate prepolymers wherein solvents, which have boiling point properties that meet those of applicants' solvents, are added to the prepolymers, and the solvent containing prepolymers are then subjected to distillation to obtain products having levels of isocyanate monomers which meet the instantly claimed levels. Furthermore, the reference discloses that MDI is a suitable diisocyanate for the process. See abstract and columns 2-6 within Rosenberg et al.

13. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schnabel et al. ('171) or Dunlap et al. ('442) or Rosenberg et al. ('193), each in view of Rizk et al. ('996) or Lander ('473).

As aforementioned within paragraphs 9-12, the primary references disclose polyurethane prepolymers having diisocyanate monomer contents that meet applicants' claimed monomer contents that are derived from diphenylmethane diisocyanate.


14. The primary references are silent regarding the reaction of the prepolymers with blocking agents to yield blocked isocyanate group containing prepolymers; however, the blocking of diphenylmethane diisocyanate derived prepolymers with conventional blocking agents, such as those claimed, to yield storage stable prepolymers was known at the time of invention. This position is supported by the disclosures and examples of Rizk et al. and Lander. Therefore, since the blocking of MDI prepolymers to obtain storage stable reactants and/or one-component coating or sealing compositions was a conventional practice at the time of invention, the position

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is taken that it would have been obvious to block the prepolymers of the primary references for the same reasons.

Any inquiry concerning this communication should be directed to Rabon Sergent at telephone number (571) 272-1079.

  
RABON SERGENT  
PRIMARY EXAMINER

R. Sergent

June 10, 2004